

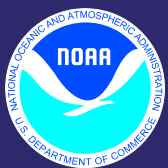
Hazardous Weather: **Week of 16 November 2009**

Another threat of flooding, damaging winds, high surf, landslides and mountain snows and avalanches

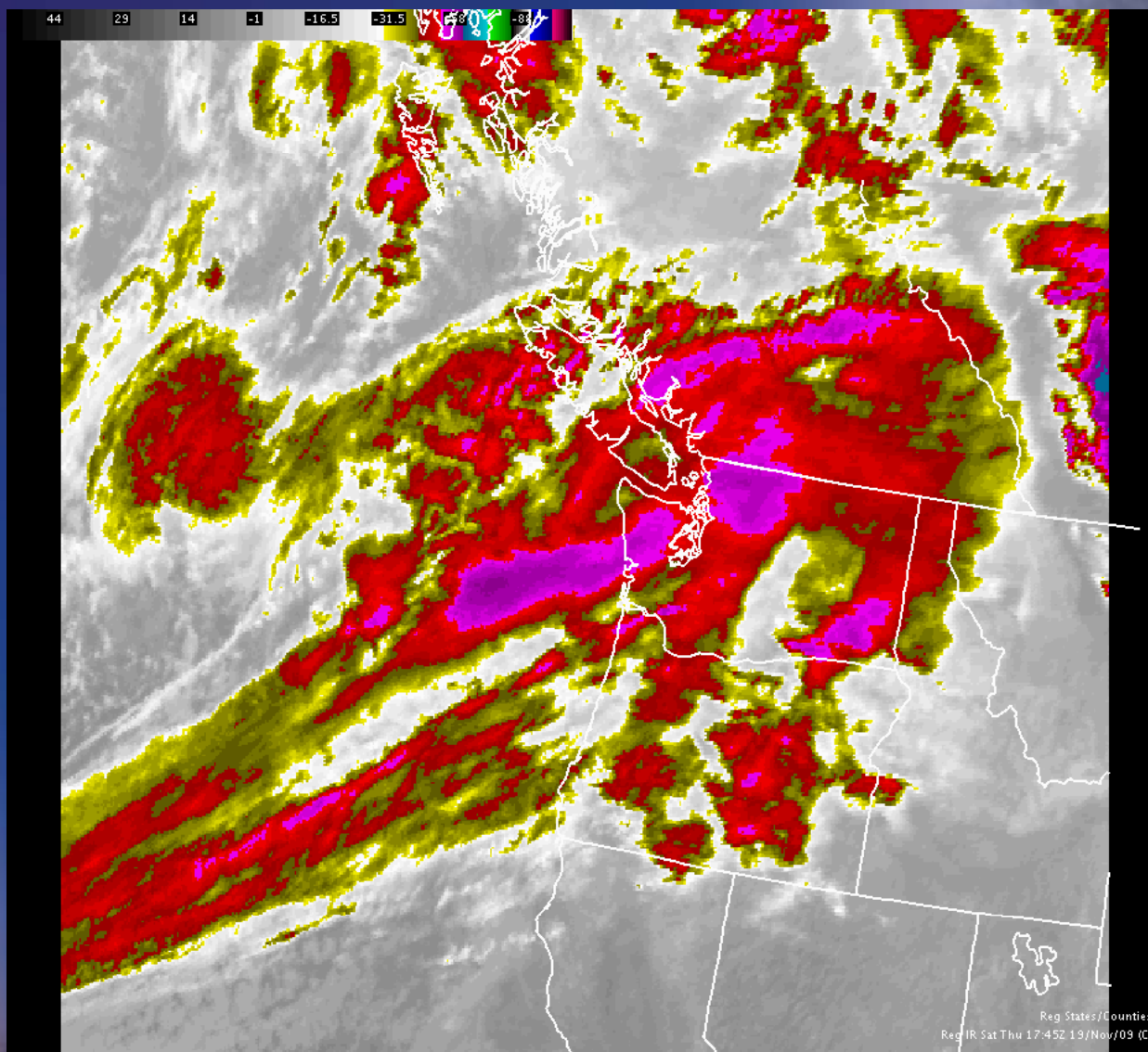
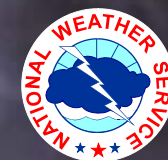
Kirby Cook

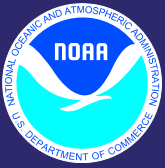
National Weather Service – Seattle/Tacoma

19 November 2009



IR Satellite





Overview



- **The front currently sitting over the area will be re-energized by a storm approaching from the West.**
 - *Will kick up winds again late today as well as a surge of rain – lasting into the evening hours*
- **Final significant system this week will move across the area Friday**
 - *Quick passage*
 - *Breezy and wet (generally weaker system/colder air)*
- **Impacts**
 - *Heavy rainfall likely to resume again tonight into Friday... mainly over the Olympics and SW Washington*
 - *Flooding remains a concern for the Olympic Peninsula and SW Interior*
 - *Landslide threat remains given heavy precipitation earlier this week*
 - *Mountain snow for Cascades with renewed avalanche threat*
 - *Periods of strong, damaging winds remain possible across western Washington this afternoon and tonight*



Wednesday Summary



Precipitation

Coast

Aberdeen 2.60

Forks 3.58

Hoquim 2.45

Humptulips 3.08

Strait

Port Angeles 1.19

Interior

Shelton 1.81

Bellingham 0.49

Paine Field 0.66

Sea Tac 0.45

Olympia 0.70

Mountains

Baker 17 in. snow

Hurricane 2.0 in. liquid (~20 in. snow)

Wind

Hurricane 61 G 107 mph

Destruction Island 52 G 66 mph

Smith Island 51 G 58 mph

Cherry Point 50 G 61 mph

Crystal Mtn 47 G 70 mph

Bellingham 37 G 54 mph

Friday Harbor 36 G 56 mph

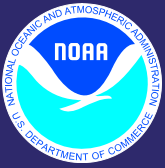
West Point 31 G 35 mph

Point Wilson 31 G 46 mph

Mount Baker 29 G 60 mph

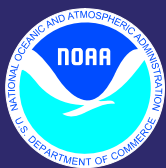
SeaTac 25 G 35 mph

Hoquiam 31 G 47 mph



**For current watches, warnings,
and advisories please refer to
our web page at:
weather.gov/Seattle**

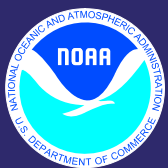




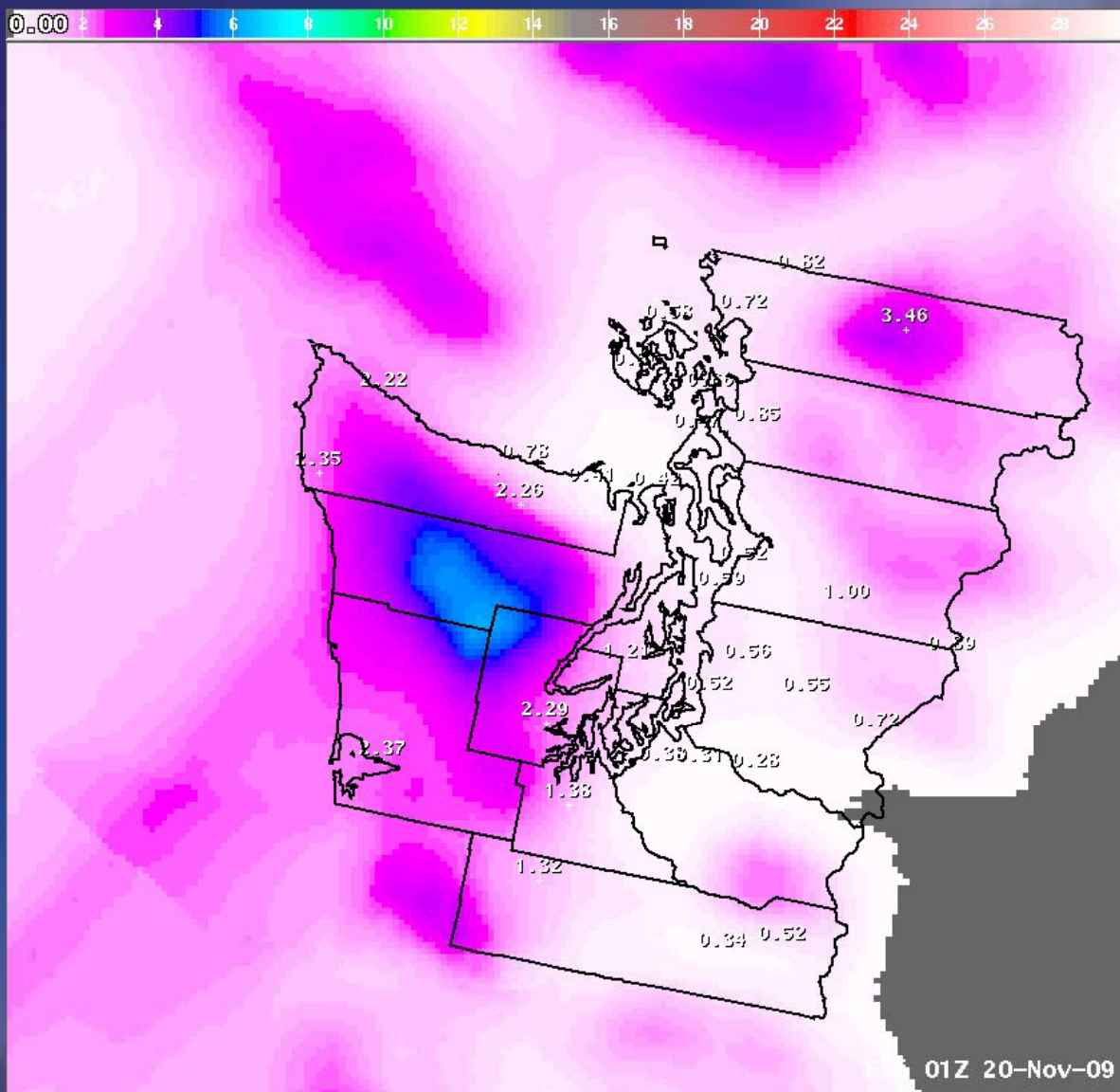
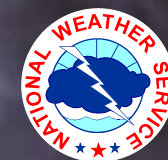
Precipitation Forecast

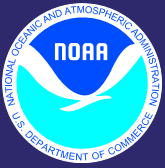


- **Rainfall amounts** – Storm Total today thru Friday morning
 - **Lowlands:** $\frac{1}{2}$ to 1 inch
 - **Mountains:**
 - **Olympics** – 4 to 6 inches
 - **North Cascades** – 2 to 4 inches
 - **Central Cascades** – 1 to 2 inches
 - **Willapa Hills** – 2 to 4 inches
 - **Snow Levels** – starting low
 - *Olympics ...2500 rising to 5500 ft today*
 - *Cascades...2500 rising to 4500 to 5500 ft today*
 - » Except at passes (low level easterly flow)
 - *All Areas...falling on Friday below pass levels (~2000 ft)*



Precipitation ending Fri AM

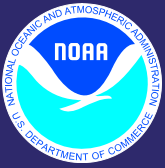




Flooding

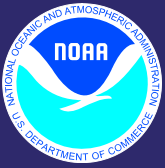


- **Warning**
 - *Skokomish, Satsop, Bogachiel*
- **Watch**
 - *Olympic Peninsula rivers*
 - Elwha and Dungeness Rivers
 - *SW Washington rivers*
 - Chehalis and Newaukum Rivers
- **Monitoring elsewhere**
 - *Snow levels rise today before falling again Friday*
 - *Weekend system is progressive with lower snow levels*
 - *Low Threat elsewhere including the Green River*



Landslide Threat

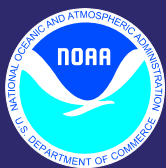
- Isolated slides have already occurred
- Recent wet weather systems have helped moisten soils to exceed critical thresholds
- Additional heavy rain will raise the risk into this weekend
 - *Greatest threat on the Olympic Peninsula*



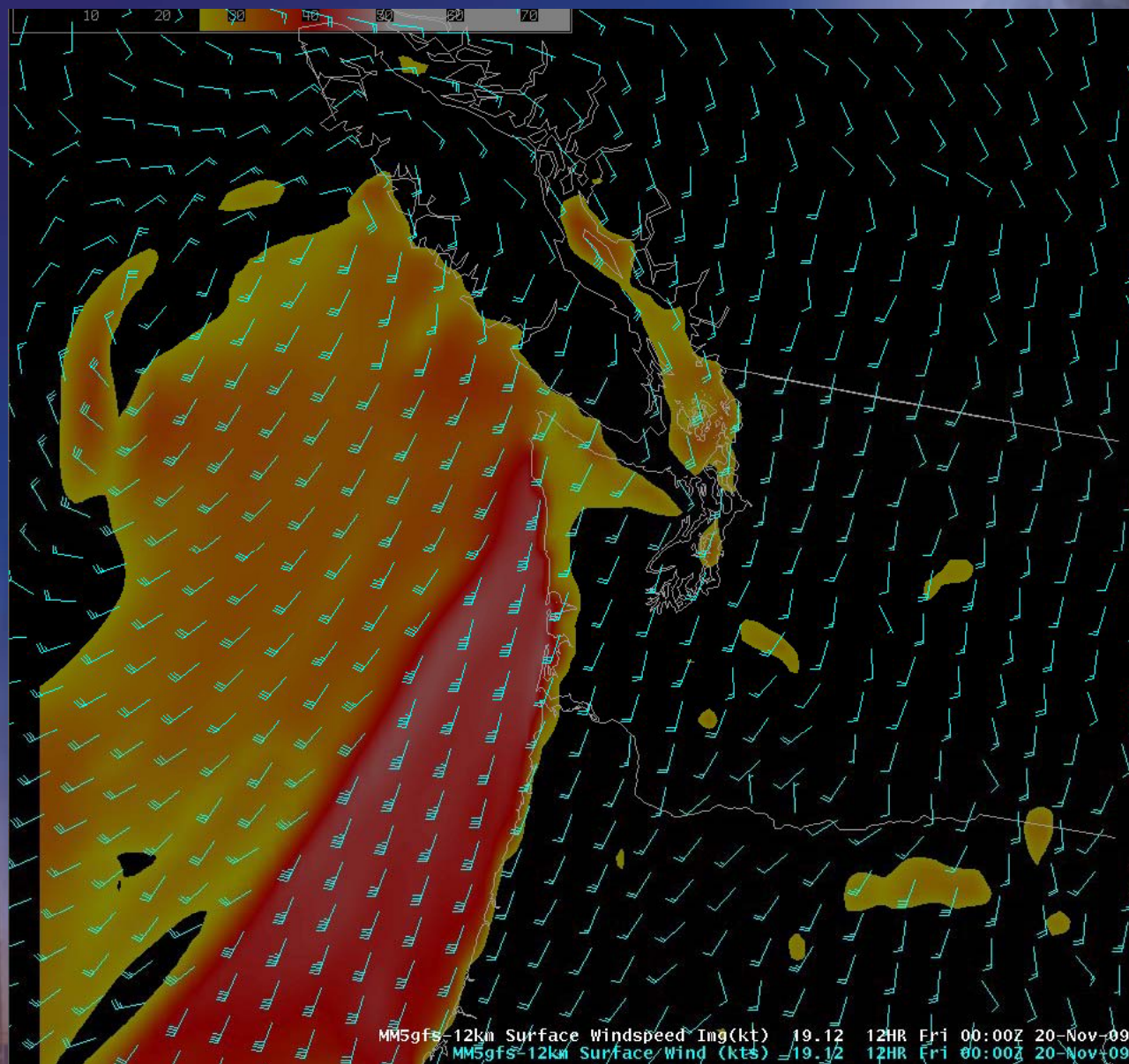
Wind

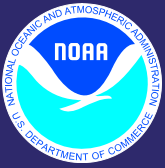


- **One more event** – similar to the previous three systems
 - *Later today/tonight*
 - Coast (**High Wind Warning**)
 - *35 - 45 mph sustained with gusts to 70 mph*
 - *Peak in the 3 pm to 10 pm time period*
 - North Interior (**High Wind Warning**)
 - *40 mph sustained with gusts to 60 mph*
 - *Peak in the 6 pm to midnight time period*
 - Puget Sound region / Hood Canal / Lower Chehalis (**Wind Adv**)
 - *25 – 35 mph sustained with gusts to 50 mph*
 - Mountains
 - *40 to 65 mph in exposed locations*



Wind Snapshot Tonight





Marine Waters



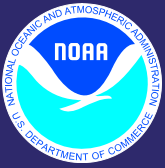
- **Coast**

- **High Surf Advisory (till 4AM Fri)**
 - *20 to 25 feet tonight*
- **Storm Warning (till midnight)**
 - *South wind to 48 to 63 knots late today and tonight*

- **Inland Waters**

- **Storm Warning West Entrance Strait of Juan de Fuca (through late tonight)**
- **Gale Warning all other waters (through late tonight)**



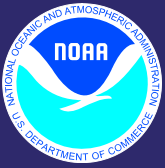


Mountain Snow and Avalanche Danger



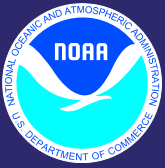
- **Winter storm warning**
 - *Cascades – through this afternoon*
 - 1 to 3 feet new snow – highest on volcanoes
- **Avalanche warning - Cascades and Olympics**
 - *Factors – heavy snowfall then rain, warming, strong winds creating more unstable conditions on steep slopes*
- **Snow Levels**
 - **Olympics**...rising to 5500' today
 - **Cascades**...rising to 4500 to 5500' today
 - **All Areas**...falling on Friday below pass levels





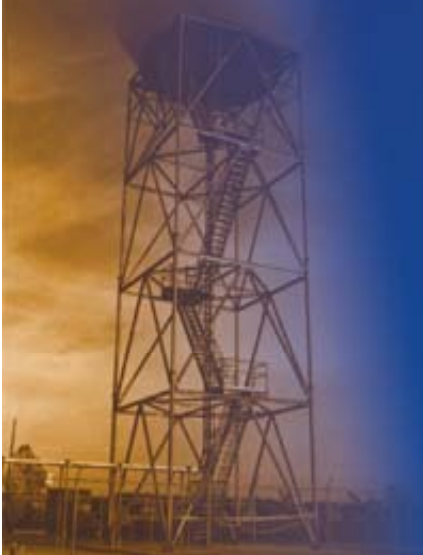
Impact Summary

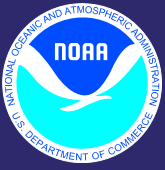
- **Later today into Friday**
 - *Renewed Heavy Rain / Flooding*
 - *Landslide Threat*
 - *Strong Damaging Winds*
 - More downed trees (**wetter soils**) and power outages
 - *Mountain Snow and High Avalanche Danger*
- **Stay Tuned !!**



Resources

- weather.gov/seattle/ – NWS Seattle web site
- nwac.us – Northwest Weather and Avalanche Center
- wsdot.wa.gov – Washington State Dept. of Transportation
- wwc.nrcs.usda.gov/snotel – Natural Resources Conservation Service (snow data)
- tidesonline.com – National Ocean Service tide data





Questions